

7000 and 7400 Panel Saws Owner's Manual



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Warranty

Safety Speed Manufacturing (SSM) warrants the parts and workmanship of these machines, including the electric motors, for three years from the original date of purchase. This warranty covers the original purchaser of the equipment. The warranty covers any defects in workmanship or materials. SSM will repair or replace, at our cost, any component that is determined to be defective. Such repair or replacement is limited to providing satisfactory replacement parts from the factory. SSM assumes no responsibility for making repairs on site. Any parts returned to the factory must be returned freight prepaid.

Safety Speed Mfg. assumes no responsibility for any damage or accidents resulting from the misuse of this tool, its misapplication, or failure to follow precautionary safety measures. SSM assumes no responsibility for any consequential damage or loss of production. SSM will not be responsible for claims made for machines that are not used or maintained in the normal course of business, used for applications not intended, or modified in any way.

When you purchase a Safety Speed product in this category you are automatically covered for one year from the date of the purchase. We ask that you fill out the warranty registration card, online form, or call us to register your warranty for the additional two years within 30 days of your original purchase.

This manual covers the following SSM panel saw models:

7000, 7000M, 7400, 7400M, 7400MA, 7400XL, 7400XLM, 7400XLMA



Safety Labels and Warnings

	CAUTION Pinch point hazard. Keep hands clear.	
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WARNING



CABLE IS UNDER TENSION. FOLLOW INSTALLATION INSTRUCTIONS IN OPERATOR'S MANUAL. DO NOT ATTEMPT TO DISASSEMBLE OR REPAIR THIS DEVICE.



CAUTION: DO NOT OPERATE THIS MACHINE UNTIL YOU HAVE READ AND FULLY UNDERSTAND ALL GENERAL OPERATING AND SAFETY INSTRUCTIONS.

WARNING!

PAY PARTICULAR ATTENTION TO INSTRUCTIONS ON REDUCING RISK OF KICKBACK.



DANGER



DO NOT OPERATE SAW IF LABEL CAN BE READ.



WARNING



PUSH



- Horizontal cutting must be done in the direction of the arrows.
- Do not cut material smaller than carriage.

WARNING



TO REDUCE RISK OF INJURY, DO NOT OPERATE TOOL WITHOUT GUARDS SECURED IN PLACE. BEFORE CHANGING BLADES OR ACCESSORIES UNPLUG TOOL, AND WAIT FOR BLADE TO STOP.



WARNING

ROTATING SAW BLADE - DO NOT PLACE HANDS UNDER SAW CARRIAGE OR NEAR BLADE.

MOVE MATERIAL IN DIRECTION OF ARROW WHEN RIPPING



Please Read Before Operating the Saw

WARNING! Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paint
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specifically designed to filter out microscopic particles.



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SAFETY

WARNING: When using electric tools, always follow basic safety precautions to reduce the risk of fire, electric shock, and personal injury.

READ AND SAVE ALL INSTRUCTIONS FOR FUTURE USE. Before use, be sure everyone using this tool reads and understands this manual as well as any labels packaged with or attached to the tool.

1. **KNOW YOUR POWER TOOL.** Read this manual carefully to learn your power tool's applications and limitations as well as potential hazards associated with this type of tool.
2. **DO NOT ALLOW UNQUALIFIED PEOPLE TO OPERATE** the tool.
3. **AVOID DANGEROUS ENVIRONMENTS.** Do not use your power tool in rain, damp or wet locations, or in the presence of explosive atmospheres (gaseous fumes, dust, or flammable materials). Remove materials or debris that may be ignited by sparks.
4. **KEEP WORK AREA CLEAN AND WELL LIT.** Cluttered, dark work areas invite accidents. Provide at least 200 watts of lighting at the front work area of the tool. Eliminate all shadows that could interfere with clear viewing of the work area.
5. **DRESS PROPERLY.** Do not wear loose-fitting clothing or jewelry. Wear a protective hair covering to contain long hair, as it may be caught in moving parts. When working outdoors, wear rubber gloves and insulated, nonskid footwear. Keep hands and gloves away from moving parts.
6. **USE SAFETY EQUIPMENT.** Everyone in the work area should **wear safety goggles or glasses with side shields** that comply with current PPE safety standards. Wear hearing protection during extended use and a dust mask for dusty operations. Hard hats, face shields, safety shoes, etc. should be used when specified or necessary. Keep a fire extinguisher nearby.
7. **KEEP BYSTANDERS AWAY.** Keep children and bystanders at a safe distance from the work area to avoid distracting the operator and contacting the tool or extension cord.
8. **MAKE THE WORKSHOP CHILD PROOF** with padlocks, master switches, etc.
9. **NEVER LEAVE THE TOOL RUNNING UNATTENDED.** Turn the power off. Do not leave the tool until it comes to a complete stop.
10. **PROTECT OTHERS IN THE WORK AREA** from debris such as chips and sparks. Provide barriers or shields as needed.
11. **SECURE THE WORK.** Use a clamp, vise, or other practical means to hold your work securely, freeing both hands to control the tool.
12. **USE THE RIGHT TOOL.** Do not use a tool or attachment to do a job for which it is not recommended. For example, do not use a circular saw to cut tree limbs or logs. Do not alter the tool, remove guards, or operate the saw when removed from the carriage and frame. Only use the machine in accordance with the capacities and specifications listed.
13. **USE PROPER ACCESSORIES.** Using non-recommended accessories may be hazardous. Be sure accessories are properly installed and maintained. Do not defeat a guard or other safety device when installing an accessory or attachment.
14. **CHECK FOR DAMAGED PARTS.** Inspect guards and other parts before use. Check for misalignment, binding of moving parts, improper mounting, broken parts, and any other conditions that may affect operation. If abnormal noise or vibration occurs, turn the tool off immediately and have the problem corrected before further use. Do not use a damaged tool. Tag damaged tools "DO NOT USE" until repaired. Repair or replace a damaged guard or other part. For all repairs, insist on identical replacement parts.



15. REMOVE ALL ADJUSTING WRENCHES AND TOOLS from the tool before turning it on. Make this a habit.
16. GROUND YOUR TOOL. See “Electrical Safety,” page 7. AVOID ACCIDENTAL STARTING. Be sure your tool is turned off before plugging it in. Do not use the tool if the power switch does not turn it on and off. Observe correct lockout/tag out procedures when performing maintenance on the tool.
17. DO NOT FORCE THE TOOL. Your tool will perform best at the rate for which it was designed. Excessive force only causes operator fatigue, increased wear, increased risk of binding or sudden breakage, and reduced control.
18. KEEP HANDS AWAY FROM ALL CUTTING EDGES AND MOVING PARTS.
19. DO NOT ABUSE THE CORD. Never unplug the cord by yanking it from the outlet. Pull the plug rather than the cord to reduce the risk of damage. Keep the cord away from heat, oil, sharp objects, cutting edges, and moving parts.
20. DO NOT OVERREACH. MAINTAIN CONTROL. Keep proper footing and balance at all times. Maintain a firm grip.
21. STAY ALERT. Watch what you are doing, and use common sense. Do not use a tool when you are tired, distracted, or under the influence of drugs, alcohol, or any medication causing decreased control.
22. UNPLUG THE TOOL, if applicable, when it is not in use, before changing items such as blades, and before performing recommended maintenance. Observe appropriate lockout/tag out procedures.
23. MAINTAIN TOOLS CAREFULLY. Keep handles dry, clean, and free from oil and grease. Keep cutting edges sharp and clean. Follow instructions for lubricating and changing accessories. Periodically inspect tool cords and extension cords for damage. Have damaged parts repaired or replaced.
24. MAINTAIN LABELS AND NAMEPLATES. These carry important information. If unreadable or missing, contact Safety Speed for a free replacement.
25. AVOID KICKBACK. Kickback is a violent reaction to a pinched or binding saw blade. It throws the saw upward when crosscutting and throws the work piece out when ripping. Firm control, proper support of the work piece, and concentration on the job are essential to reduce the risk of injury from kickback:
 - a. KEEP SAW BLADE CLEAN AND SHARP. A dull or improperly sharpened blade produces a narrow kerf and is likely to be pinched by the work piece. Any blade with a small set, even though sharp, may be likely to kick back. A dull blade encourages you to force the saw, causing reduced control and blade binding. The excessive friction generated can cause the blade to warp or bind. Use only blades that are recommended for use with your tool. Do not use blades with mounting holes that are not the correct size or shape. Never use defective or incorrect blade washers or bolts. Be sure the blade bolt is tight. Select the proper blade for the application. Blade speed specifications must be at least as high as the nameplate RPM.
 - b. DO NOT FORCE THE TOOL. Let the saw do the work. A saw is more easily controlled and will do a better job when used in the manner for which it was designed.
 - c. SECURE WORK PROPERLY. If a piece is supported on both sides of the cut in such a way that it allows the material to bow and pinch the blade, it may produce kickback. Do not cut pieces smaller than the saw carriage. Support large panels properly.
 - d. IF THE BLADE BINDS, the saw or work piece may kick back. Keep hands, body, and bystanders out of the path of the blade and material.
 - e. STAY ALERT. Watch what you are doing and use common sense. Do not allow yourself to be distracted. Do not operate the tool when you are tired or under the influence of drugs or alcohol. Hold the tool and material firmly and exercise control at all times. Position yourself and co-



workers out of the kickback path. Repetitive cuts that lull you into careless movements can also cause kickback. A brief “stretch” may be all that is necessary to avoid a problem.

- f. **RESTARTING IN MID-CUT.** If the saw is stopped in mid-cut, allow the blade to stop. Then back up the saw (if crosscutting) or the board (if rip cutting) before restarting.
 - g. **IF THE BLADE STALLS, DO NOT TURN THE SWITCH ON AND OFF.** A dull blade or excess pressure may cause stalling. Release the switch immediately if the blade binds or the saw stalls, and remove the saw from the cut.
 - h. **AVOID CUTTING NAILS OR OTHER FASTENERS.** Inspect for and remove all metal fasteners before cutting.
 - i. **SUPPORT THIN MATERIAL.** Large sheets such as paneling, Formica, etc., tend to warp or sag and must be well supported over their entire length to avoid pinching the blade.
27. **DO NOT USE PUSH STICKS.**
28. **KEEP MATERIALS BEING CUT AGAINST THE FRAME** and rollers or Mid-way Fence at all times.
29. **CROSSCUTTING (VERTICAL CUTTING) MUST ALWAYS BE DONE FROM THE TOP DOWN.** Raise the saw carriage to the uppermost position on the guides and lock it into position with the carriage lock whenever the tool is not in use. See “Operating Procedure: Crosscutting”, for more information.
30. **RIP CUTTING (HORIZONTAL CUTTING) MUST ALWAYS BE DONE WITH THE DIRECTION OF THE ARROW.** Raise the saw carriage to the top of the guides and lock it into position with the carriage lock whenever the tool is not in use. See “Operating Procedure: Rip cutting”, for more information.
31. **ALWAYS WAIT FOR THE BLADE TO STOP COMPLETELY BEFORE CHANGING POSITIONS.** Unplug the tool before transporting or moving it.
32. **DO NOT PLACE YOUR HANDS ON OR UNDER THE SAW CARRIAGE OR IN THE PATH OF THE BLADE.** Do not try to retrieve a piece of cut material while the blade is rotating. This symbol is to remind you:



33. **DO NOT DEFEAT THE GUARDS OR OPERATE THE TOOL WITHOUT THE GUARDS IN PLACE.** Do not remove the saw motor from the carriage.
34. **NEVER STAND ON THE TOOL.** Serious injury could occur if the tool is tipped or if you unintentionally contact the cutting tool.
35. **DIRECTION OF FEED.** Always feed work into the blade or cutter against the direction of the rotation of the blade or cutter.
36. **HOME CENTERS AND COMMERCIAL LOCATIONS** should check with their local electrical contractor to be sure the proper amount of electrical power (volts/amps) will be available for this machine during all operating hours and conditions. Be aware of any special electrical safety requirements for this machine (examples: key lock offs, timers, coded security, touch pads, or time lockouts) required by local codes.
37. **DISCONNECT AND LOCK THE POWER OFF** before changing saw blades or making any adjustments.
38. **BEFORE CONNECTING THE SAW MOTOR TO THE POWER SUPPLY BE SURE THE SAW MOTOR SWITCH IS IN THE OFF POSITION.**
39. **KEEP THE CARRIAGE LOCK SECURELY TIGHTENED** when the machine is not in use.
40. **REFER TO PAGE 2 FOR SAFETY LABELS.**



Electrical Safety

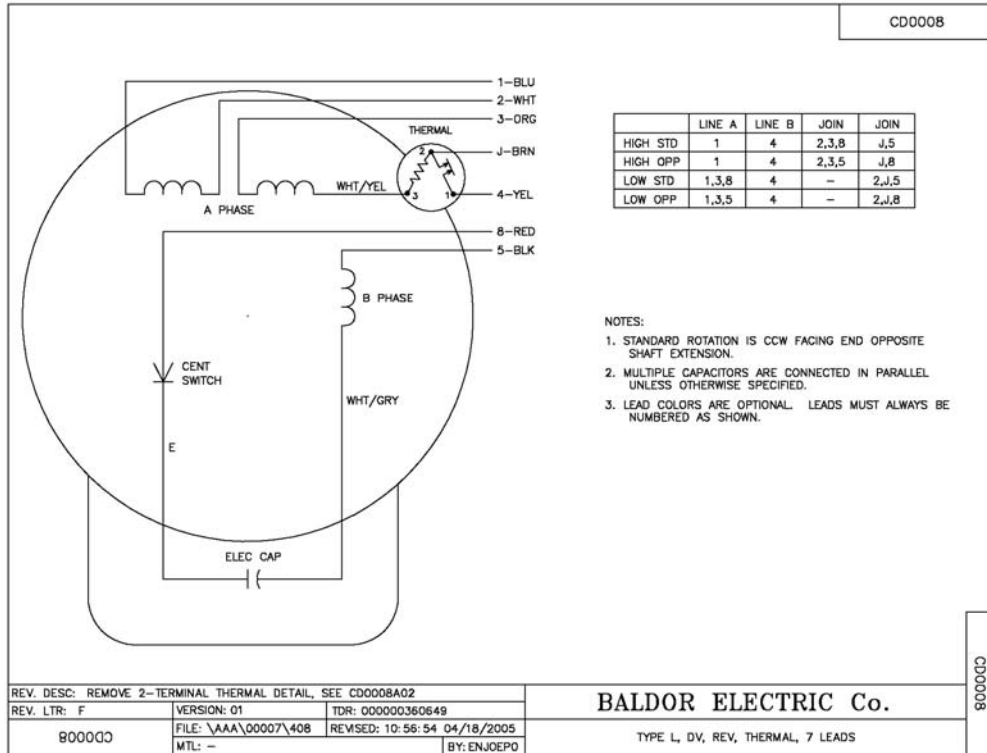
WARNING: Improperly connecting the grounding wire can result in the risk of electric shock. Check with a qualified electrician if you are not sure that the outlet is properly grounded.

Do not expose your tool to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

Motor Wiring Diagrams

2HP, 1PH

BALDOR • RELIANCE Product Information Packet: L3515M - 2HP,3450RPM,1PH,60HZ,56/56H,3535L,TEFC



3HP,3PH

BALDOR • RELIANCE Product Information Packet: M3559-5 - 3HP,3450RPM,3PH,60HZ,56/56H,3535M,TEFC,F

CD0006

TYPICAL WYE-CONNECTED MOTOR

TYPICAL DELTA-CONNECTED MOTOR

LINE

NOTES:

1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS				BALDOR ELECTRIC Co.	CD0006
REV. LTR: D	BY: JLP	REVISED: 01/21/99 4:02	TDR: 0171435		
90000D	FILE: AAA00005141	MDL: -	MTL: -		
3PH, 3V, 3 LEADS, WYE OR DELTA CONNECTED					



INSTALLATION

Tools Required for Installation

- Two 9/16" blade wrenches (provided)

NOTE: Additional tools may be required for installing accessories.

Operating Environment

For safe operation, install the tool in an area that is well lit. Eliminate all shadows that could interfere with clear viewing of the work area.

Do not locate the tool in a damp or wet location, or a location where it may be exposed to rain.

If the tool will be operated in an enclosed area, SSM recommends installing a Dust Collection System

Avoid explosive atmospheres (gaseous fumes, dust, or flammable materials).

Secure the area so that children and bystanders are kept a safe distance from the work area. Provide barriers and shields as needed.

NOTE: The average noise level of SSM saws and routers is less than 80 dB.

Unpacking

1. Remove all the plastic sheeting, protective cardboard, and wood crating.
2. One or more boxes of parts are attached to the frame. The box on the front holds a blade, machine manual, blade wrenches, a Quick Stop Block, and a Mid-way Fence Block. Remove these items for usage and installation.

Machine Assembly

Your SSM 7000 or 7400 series saw comes from the factory assembled and aligned.

During shipment the 8' Quick Stop Angle (for the left side of the machine) is taped to the back of the machine frame and the 5' Quick Stop Angle (right side) comes installed on the machine. Remove the 8' angle and secure it to the panel saw frame (see detailed instructions). Mounting holes for the Quick Stop Angle are pre-drilled at the factory.

If you have ordered the optional Stop Bar, Dust Vacuum, Digital Quick Stop Gauge, SawGear® Measuring System (7400 model), Tigerstop® Measuring System (7400 model), or Material Scoring Attachment (7400 model), you will find assembly instructions packed with them.

Standing Up the Tool

The 7000 and 7400 Series saws come with the stand mounted and attached to the machine. It is not recommended that the stand be removed.

WARNING: A freestanding saw must be located away from areas where it could be accidentally tipped over.

Mounting the Motor on the Carriage

The 7000 and 7400 Series saws are shipped with the saw motor already mounted.



Installing the Blade Guard

The 7000 and 7400 Series saws feature a blade located behind the carriage and do not have a separate removable blade guard on the front of the carriage.

Adjusting the Rulers (see “Adjusting the Rulers” in the Operation section for additional instructions)

The saw has two rip cut rulers mounted vertically on the guide tubes. It also has a pair of rulers on both the Mid-way Fence and on the Quick Stop Angles, one on each side of the saw. All rulers must be adjusted after installing the blade as each blade kerf may be different.

The horizontal rulers in the Mid-way Fence and Quick Stop Angles are located in a dovetailed groove on the face of the aluminum. The rulers are held in place by strips of magnetic tape located behind the face of the ruler. To move the ruler place both hands on the aluminum backing and slide the ruler right or left with both thumbs.

The vertical rulers can be adjusted up or down to accurately read the distance from the underside of the saw blade (when in a horizontal cutting position) and the top of the roller material carriage (left ruler), and the underside of the saw blade (when in a horizontal cutting position) and the top of the Mid-way Fence (right ruler).

After the saw is placed in service, and the rulers adjusted, you can make a few simple cuts to verify that the rulers are lined up correctly.



Installing the Cord Keeper

The cord keeper keeps the cord away from the blade or bit and away from your work piece. The model 7000 and 7400 Series have an integrated cord keeper which requires no installation.

OPERATION

WARNING: The following are suggestions that give you a general idea of how a panel saw is intended to be operated. No instructions can replace common sense and experience. Be sure you and all operators have enough time and material to become familiar with the general operating characteristics of this tool, and have **FULLY READ AND UNDERSTOOD** all general operating and safety instructions.

Limitations of the Tool

Small Work pieces

SSM saws and routers are not recommended for work pieces that are smaller than the carriage. **Do not cut pieces that are so small that your hand must be behind the carriage to hold the piece in place.** Use a tool better suited to these applications, such as a table saw, radial arm saw, or band saw.

Work piece Height (Crosscutting)

SSM tools are limited in crosscut capacity as shown in Table I below.

Table I: Maximum Work piece Height for Crosscutting

Model	Max. Height
7000	64 in.(1625mm)
7400	64 in.(1625mm)
7400XL	64 in.(1625mm)

Work piece Thickness

Maximum thickness of a work piece to be cut with SSM saws:

- 2 ¼" (55mm) on the Models 7400 and 7400XL
- 2" (50.8mm) 7000 models.

SSM recommends using the Hold-Down Bar for frequent cutting of materials thinner than ¾"(19mm).

Crosscutting Limitations

When crosscutting (vertical cuts), the work piece must be supported on at least two rollers (Figure 1) for safe operation and accurate cutting. When you use the Midway Fence, the work piece must extend at least 4" (26.6mm) beyond the carriage on both sides.

Do not crosscut work pieces that extend more than 5 feet (1.5m) beyond the outermost roller.



Figure 1: Crosscutting (work supported on at least two rollers). Model 7000 is used in the example.

Rip cutting Limitations

The minimum length recommended for rip (horizontal) cuts is 2-1/2 feet (.79M), so the work piece will be supported on at least four rollers. Pieces shorter than 64 inches (1.63m) can be rotated 90° and be crosscut, as long as they are supported by at least two rollers.

On 7000 and 7400 models, there is no limit to the length of board that can be rip cut. However, you must insure that the board is properly supported at all times. For regular rip cutting of pieces longer than 10 feet, SSM recommends using extended-frame Model 7400XL.

Selecting a Saw Blade

The saw blade must be carefully matched to the materials being cut. Improper blade selection can result in reduced tool life, inaccurate and poor quality cuts, and safety risks. The following table lists some recommended blades for certain applications.

If in doubt, consult with your machinery dealer, or with our customer service department (**800-772-2327**), to determine the best blade for your cutting needs.

Table I: Recommended SSM Blades for Certain Applications

Material	8200HG	840ATB	860ATBL	860ATB	864NRATB	860NRTCG	860TCG	860TCGS	880ATBL	880TCGL
Aluminum composite						X	X	X		
Aluminum plate						X				
Chipboard		X	X	X			X		X	
Double-face panels			X		X	X			X	
Duraply							X			X
Gatorfoam								X	X	
Hardwood		X	X	X					X	
Laminated panels		X	X						X	
Masonite		X	X				X		X	
Melamine					X	X				X
Particle board		X	X				X	X	X	
Plexiglas up to 1/2"							X	X		
Plywood	X	X	X	X				X	X	
Polycarb. (Lexan)	X							X		
Polyester					X	X				X
Printed grain lamin.					X					X
Solid wood		X	X	X				X	X	
Veneer			X		X				X	
Vinyl					X	X			X	

Always keep blades clean and sharp for the best performance. A dull or dirty blade can bind and pinch, resulting in kickback and poor quality cuts. **If in doubt, replace it with a new blade.**

The blade diameters specified for SSM panel saws are 8" (200mm) or 8 1/4" (210mm), with an arbor of 5/8" (16mm). Minimum blade kerf for the saw blade is .10"(2.5mm). The Kerf Spreader thickness is .088", blades that are thinner than this kerf should not be used.



Basic Operating Functions

Operator Controls

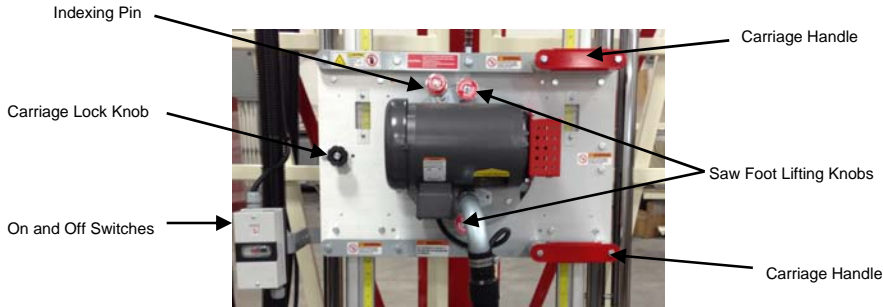


Figure 2: Carriage

Changing the Blade

1. Observe appropriate lockout/tag out procedures to insure the tool cannot accidentally be powered.
2. Unplug the saw and or/ disconnect the power supply at the stop/start switch before changing blades or making any adjustments.
3. Lower saw carriage to comfortable working height and lock in place with the carriage lock knob.
4. With the turntable in the cross cut position lower the saw foot to its maximum down position by means of the saw foot adjustment control knobs.
5. Remove plastic dust tube.
6. Using the two blade wrenches furnished reach over the saw carriage (or work from behind the machine if you prefer) and loosen (counter clockwise) the arbor nut and collar.
7. The rear end of the arbor shaft has been squared off to allow the use of a wrench to prevent it from turning while the arbor nut is loosened.
8. After removing the arbor nut and front collar slide the saw blade off the arbor and out the backside of the Panel Saw along the edge of the saw foot.
9. To re-mount the new saw blade reverse the procedure above. Be sure the blade collars are clean and the arbor nut is not over tightened.
10. Loosen the carriage lock and allow the saw carriage to return to the top of the guides.
11. Reconnect the power.

NOTE: You may have to readjust the rip and crosscut rulers after changing blades or installing a re-sharpened blade. See "Adjusting the Crosscut Rulers".



Starting and Stopping the Motor

Start the motor by pushing the black button ON. Stop the motor by pressing the red button OFF.

Moving the Carriage Up or Down

Use the red handles on the right hand side of the carriage for moving the carriage.

Locking the Carriage

Lock the carriage by tightening the Carriage Lock Knob on the carriage to the left of the motor (see Figure 2).

Rotating the Turntable on the Carriage

Unscrew the small and large Indexing Pin knobs **by hand**, turning them counter clockwise. Raise the Indexing Pin high enough to locate it over a tapered hole in the mounting plate, rotate the saw motor, and then turn the small Index Pin knob clockwise to lower it into the other tapered hole. Retighten the small Indexing Pin knob by hand, then secure the Indexing Pin in place by hand tightening the larger Indexing Pin knob.

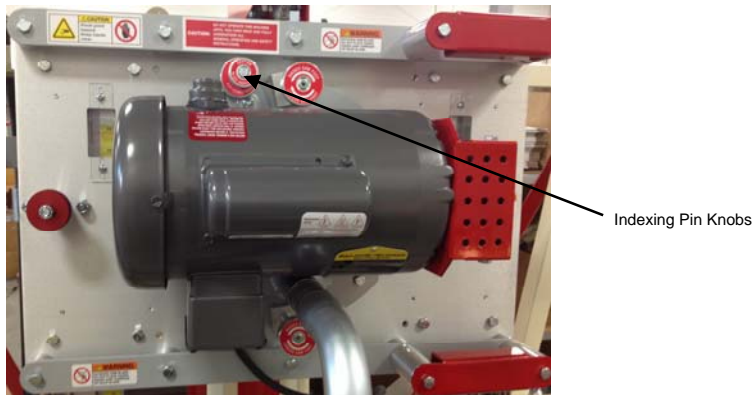


Figure 3: Index Pin Identification



The saw carriage moves from top of machine to bottom of machine when cross cutting.

Figure 4: Proper Index Pin location for cross cutting (vertical cutting).



The carriage must be locked in place and the material is moved over the rollers or Mid-way Fence for rip cutting. Important: when the Indexing Pin is in this position the material being cut must move through the saw from right to left.

Figure 5: Proper Index Pin location for rip cutting (horizontal cutting).

Adjusting the Rulers

The saw has two rip cut rulers mounted vertically on the guide rails, one for measuring the distance from the material rollers (left ruler) and one for measuring the distance from the Mid-way Fence (right ruler). It also has a pair of rulers on both the Mid-way Fence and on the Quick Stop Angles, one on each side of the saw. All rulers must be adjusted after installing the blade as each blade kerf may be different.

The horizontal rulers in the Mid-way Fence and Quick Stop Angles are located in a dovetailed groove on the face of the aluminum. The rulers are held in place by strips of magnetic tape located behind the face of the ruler. To move the ruler place both hands on the aluminum backing and slide the ruler right or left with both thumbs.

The two vertical measuring indicators can be adjusted up or down to accurately read the distance from the underside of the saw blade (when in a horizontal cutting position) and the top of the roller material carriage (left ruler) and the top of the Midway Fence (right ruler).

Adjusting the Crosscut Rulers

Be sure the blade is installed and the machine is turned **off** before following these steps:

1. Raise the Saw Foot by turning the two Saw Foot Lifting Knobs (see Figure 6) on the front of the carriage counter clockwise.
2. Use a pre-measured square (not included) that measures at least 14" (356mm) on one side. Loosen the Carriage Lock Knob and lower the carriage to a height parallel with your square.

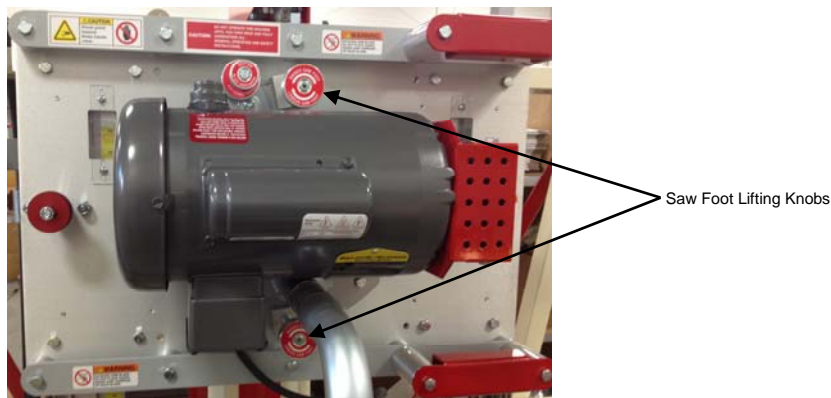


Figure 6: Adjusting the Crosscut Rulers – Saw Foot Lifting Knobs

3. Place one edge of the square perpendicular against the side of the tips of the saw blade, and the other edge of the square in front of the crosscut (horizontal) ruler. Slide the ruler so that its measure matches the measure of the square. A magnet holds the ruler in place, but you may wrap clear tape around the ruler and frame for additional hold, if required.
4. Repeat the above steps to adjust the additional crosscut rulers on the tool.
5. Make a simple cut and measure it to verify that the ruler is lined up correctly.

Adjusting the Rip Cut Rulers

Be sure the blade is installed and the machine is turned **off** before following these steps:

1. Raise the Saw Foot by turning the two Saws Foot Lifting Knobs on the front of the carriage counter clockwise (see figure 6).
2. Rotate the turntable into the rip cutting position (see Rotating the Turntable on the Carriage).
3. Use a pre-measured square (not included) that measures at least 14" (356mm) on one side. Loosen the Carriage Lock Knob and lower the carriage to a height above your square.
4. Gently lower the carriage until your blade is lying flat (perpendicular) against the top of the square. Tighten the carriage lock and slide the ruler so that its measure matches the measure of the square. A magnet holds the ruler in place, but you may wrap clear tape around the ruler and frame for additional hold, if required.
5. Repeat the above steps to adjust the additional Rip Cut ruler.
6. Make a simple cut and measure it to verify that the ruler is lined up correctly.

Adjusting the Kerf Spreader

Located on the left side of the saw carriage is round tube which supports a chrome plated Kerf Spreader blade. When making horizontal cuts this blade can be positioned in the kerf line and will support the top portion of the panel being cut to size. This will prevent downward pressure on the saw blade from the weight of the top panel and will help prevent marking of the panel edges at the time of the saw cut.

Adjust the Kerf Spreader to the vertical position where the saw blade is running, and tighten it in place with the red hand knob. When not being used, move the Kerf Spreader to the top of the saw.



Adjusting the Hold Down Bar (Space Reducer)

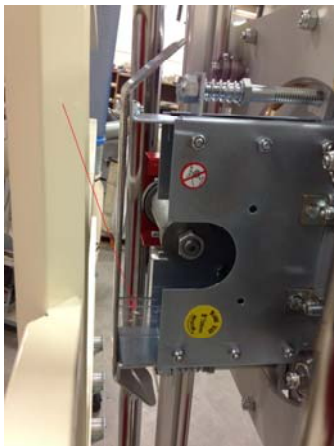
A Hold Down Bar, or space reducer, is located on the right side of the saw carriage. By loosening the locking knob, located at the bottom, the bar can be turned in the direction of the frame of the saw and thus reducing the distance, or space, between the bar and the saw frame. This is very important when working with thin, flexible material (ex: plastic sheets or plastic laminate). The Hold Down Bar, in effect, flattens and supports the material making it easier for one person to handle. When the proper distance between the bar and the frame have been determined, the bar is locked in place with the locking knob.



Hold Down Bar

Dust Control

A unique and patented dust control system is standard equipment on the 7000 and 7400 Series saws. It features a telescoping tube which moves down through the motor turntable and is protected from damage by the adjustable Saw Foot. The telescoping tube partially encircles the saw blade and draws the dust off the blade as it leaves the kerf line. To minimize maintenance and protect your own health this system should be used. A proper vacuum source for this dust control system is one which will provide 90" to 110" of static pressure, 100-110 CFM, 1 1/2" I.D. hose size. Although some in-house dust collectors will also work, one of the best options is a high quality, industrial shop vac.



Using the Knife Scoring System

An optional accessory for the 7400 series panel saws includes twin carbide knives that produce score marks directly in line with the main saw blade. The score marks are easily adjusted to match the kerf line of the saw blade.

Refer to the instructions supplied with this accessory.

Removing the motor

1. Disconnect and lock off the power supply.
2. Remove the belt guard.
3. Slip the belt off the pulley.
4. Support the motor by hand, and remove the four mounting bolts.

To reattach the motor, reverse the above procedure.

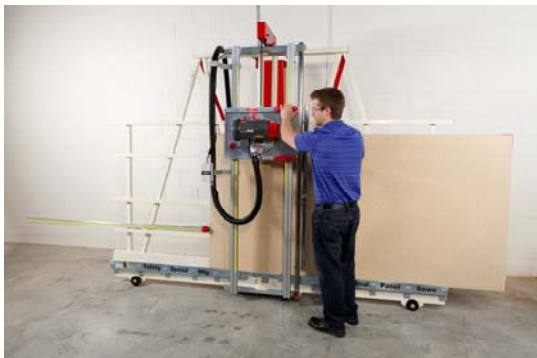
Operating Procedure: Crosscutting

A crosscut is a vertical cut that must always be done from the top to the bottom of a work piece. (See also “General Operating Tips” above and “Limitations of the Tool”.)

WARNING: To reduce the risk of injury, do not place your hands on or under the carriage or in the path of the saw blade.

1. Position the saw motor in the crosscutting position with the blade oriented vertically. See “Rotating the Turntable on the Carriage”.
2. Adjust the position of the spring-loaded saw foot using the Saw Foot Lifting Knobs to the thickness of the material so that it gently presses on the face. Use the two Saw Foot Lifting Knobs located above and below the saw motor to adjust the spring loaded saw foot to the panel.
3. Loosen the Carriage Lock Knob and move the carriage to the top of the guides.
4. Place the work piece on top of the rollers. Be careful not to drop the material on the rollers.
5. Slide the work piece to the desired position, using the crosscut rulers or optional gauging systems (Stop Bar, SawGear®, or Tigerstop®) as measures.
6. Make certain that the work piece is adequately supported and stable in the machine. Refer also to “Limitations of the Tool”. The work piece can be held with one hand; **do not hold the work piece so that your hand is anywhere behind the carriage or guides or in the path of the saw blade.**
7. Start the motor (see “Starting and Stopping the Motor”), and allow it to reach full speed before beginning the cut.
8. When the motor has reached full speed, slowly and smoothly pull the carriage down so the blade runs through the work piece. Keep one hand on the handle at all times. Be careful not to force the saw through the work piece, to avoid binding. **If the blade binds in the work piece, or the work piece shifts during the cut, stop the motor, carefully move the carriage to the top of the guides, restart the motor, and begin the cut again.**
9. Support and remove the cut-off piece as the saw completes its cut.
10. Once the cut is complete, turn off the motor and wait for the blade to come to a full stop. Move the work pieces away from the blade. Return the carriage to the top of the guides, and lock the carriage rip lock.

CAUTION: A coasting saw blade could mar the edge of a freshly cut work piece.



Operating Procedure: Rip Cutting

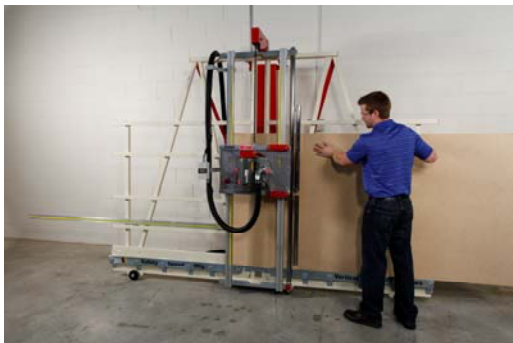
A rip cut is a horizontal cut that can be done by feeding the panel from the right to the left or feeding the material from the left to right. **Rip cuts must always be done by moving the work piece in the direction of the arrow on the saw carriage.** (See also “General Operating Tips” above and “Limitations of the Tool.”)

WARNING: To reduce the risk of injury, Rip Cutting must always be done with the material going the same direction as the arrow labels on the saw.

1. Before you begin, be sure there is enough space on both sides of the saw to completely load the work piece on the saw frame, move it past the saw, and completely off-load it.
2. Then rotate the turntable to the ripping position. See “Rotating the Turntable on the Carriage”. The rip measurement is set at the factory for cutting right to left. The measurement indicator will need to be adjusted for left to right.
3. Adjust the position of the spring-loaded saw foot to the thickness of the material so that it gently presses on the face. Use the two Saw Foot Lifting Knobs located above and below the saw motor.
4. Select the height of the saw blade above the rollers. Raise or lower the carriage until the height index tab is aligned with the corresponding dimension on the vertically mounted ruler. Lock the carriage securely to the guides in this position.
5. Start the motor (see “Starting and Stopping the Motor”) and allow it to reach full speed before beginning the cut.
6. Position the material on the side of the machine indicated by the arrows on the carriage that show direction of cut. Place the work piece on top of the rollers. Be careful not to drop the material onto the rollers.
7. When the motor has reached full speed, slowly and smoothly push the work piece through the saw, in the direction of the feed arrow on the saw. **Avoid placing your hands, clothing, or body parts under the carriage or in the cutting path of the saw blade. Do not look directly down the line of cut because dust and debris are generated during this operation.**

Be careful not to force the work piece through the saw, to avoid binding. **If the saw blade binds in the work piece, or the work piece shifts during the cut, stop the saw motor, carefully back the work piece out of the saw, reposition the work piece, restart the motor, and begin the cut again.**

8. As the work piece passes across the machine, move to the other side and complete the cut by pulling the work piece past the saw blade. Support the upper piece to keep it from pinching the blade or the Keft Spreader, or falling away from the machine.
9. Once the cut is complete, turn off the motor and wait for the blade to come to a full stop. Remove the work pieces from the machine.
10. Rotate the turntable back to the vertical position and return the carriage to the top of the guides. Lock the carriage in this position.



MAINTENANCE

WARNING: To reduce the risk of injury, always unplug the tool before doing any maintenance. Never disassemble the tool or try to do any rewiring to its electrical system. Contact a qualified electrician for electrical repairs. Always follow lockout/tag out procedures when servicing electrical equipment.

General Maintenance

Keep the tool in good repair by adopting a regular maintenance program. Before each day's use, examine the general condition of the tool, and inspect the guards, switches, power cord, and extension cord for damage. Check for loose screws, misalignment, binding of moving parts, improper mounting, broken parts, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, turn the tool off immediately and have the problem corrected before further use. Do not use a damaged tool. Tag damaged tools "DO NOT USE" until repaired (see "Repairs") and disconnect power to the tool.

Cleaning

Daily, clean all dust and debris from the vents in the motor housing.

Keep the handles clean, dry and free from oil and grease.

Use only mild soap and a damp cloth to clean the tool, because certain cleaning agents and solvents are harmful to plastics and other insulated parts. Some of these include: gasoline, turpentine, lacquer thinner, paint thinner, chlorinated cleaning solvents, ammonia, and household detergents containing ammonia. Never use flammable or combustible solvents around tools.

WARNING: To reduce the risk of injury, electric shock, and damage to the tool, never immerse the saw in liquid or allow a liquid to flow inside it.

Maintaining the Motor

Under normal conditions, motor maintenance is not necessary.

Every six months:

- Mechanically inspect and clean the gears, spindles, bearings, housing, etc.
- Electrically inspect the switch, cord, armature, etc.
- Test to assure proper mechanical and electrical operation.

Lubricating the Guides

The carriage should move smoothly up and down the rails. However, if the rails become caked with dust or debris, the carriage may get stuck or it may not slide smoothly. Periodically clean the guides with a damp cloth, following the directions under "Cleaning" above. Then use a dry lubricant such as a spray silicone. Other lubricants cause dust and debris to collect on the guides and contaminate the bearings.



SERVICE

Repairs

If your tool is damaged, call Safety Speed at 763-755-1600 for technical advice or for the name of a dealer near you who can service your machine.

Replacement Parts

Refer to the separate replacement parts information provided with the tool or call 763-755-1600.

Alignment

The tool is aligned at the factory to a tolerance of:

- $\pm 0.015"$ (.4mm), on 7000 Series
- $\pm 0.005"$ (.13mm), on 7400 Series

It needs realignment only if mishandled or abused, or if the motor or a roller is replaced.

Constructing an Alignment Tool

For maximum accuracy, construct a test square to check the full movement of the saw.

See Figure. Construct the square using a 6-ft (1.83m) metal ruler and two 4-ft (1.22m) metal rulers. (Using the 3' (.91m), 4' (1.22m), and 5' (1.5m) measurements assures squareness.) Drill holes and attach the rulers with pop rivets or small nuts and bolts.

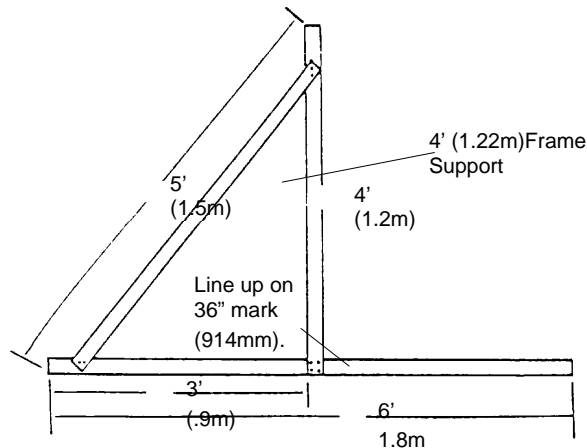


Figure 7: Field Alignment Tool

Use the 6-ft (1.83m) ruler to check squareness of the rollers. Use the 4-ft (1.22m) ruler to check squareness of the guide tubes or rails. The tool also can be used as a giant square for layouts.

Adjust the Blade Parallel to the Guides

The blade must move parallel to the guides, or tail burning may occur and the kerf will be wider than the set of the blade. Make the following adjustment only if the blade appears to be out of alignment **or if you replace the motor arbor.**

To check the blade parallelism:

If the blade “heels”, or leaves burn marks on the cut, position the carriage for a crosscut (vertical cut) and make a sample cut. Check both sides of the cut to determine which side of the blade is causing the problem (you will need this information for adjusting the blade).

To adjust the blade parallelism:

1. **Unplug the tool.**
2. Position the Adjustment Tool on the rollers. Lower the carriage so the Adjustment Tool overhangs the blade.
3. Place the Adjustment Tool against the blade. The entire face of the blade should contact the Adjustment Tool. If it does not, then the blade is not parallel to the work piece and you should:
 - a. Loosen (but do not remove) the hex-head nut located below the Indexing Pin.



Hex Nut for Blade Alignment

- b. If burn marks appear on the **left side** of the work piece, rotate the saw slightly clockwise until the entire face of the blade contacts the Adjustment Tool.

If burn marks appear on the **right side** of the work piece, rotate the saw slightly counterclockwise until the entire face of the blade contacts the Adjustment Tool.

Make only a slight adjustment at a time.

4. Securely tighten the hex nut.
5. Make a sample cut and adjust again, if necessary.

ACCESSORIES

Safety Speed offers several accessories for our panel saws.

Frame Wheels

The Frame Wheels Accessory allows the tool to be rolled from one location to another in the shop. It includes two wheels and mounting fasteners.

Wheels are standard and come installed on the 7000 and 7400 series machines.

Frame Stand

The Frame Stand Accessory allows the tool to be freestanding in the shop.

Stands are standard and come installed on the 7000 and 7400 series machines.



Dust Collection Kits

Dust Collection Kits are recommended if the tool will be used in an enclosed area. They include discharge tubing and a hose roller system to hold the outboard end of the tubing

Dust collection components (not including a vacuum source) are standard on the 7000 and 7400 series machines so it is not necessary to purchase a Dust Collection Kit separately.

The dust hose must be attached to an SSM Vacuum or to any high-pressure vacuum source that provides at least 90" to 110" of static pressure and 100-110 CFM.

Operation

Always turn the vacuum source on before starting the saw or router, and turn it off when finished cutting.



Stop Bar

The Stop Bar Accessory fits between the lower pair of horizontal frame members. It provides preset flip stops for repetitive cuts. Eight flip stops are included, and additional stops can be added.

Installation

CAUTION: Before beginning installation, disconnect the power supply to the motor, raise the carriage to the top of the guides, and lock the carriage in place with the lock knob.

CAUTION: Be sure the tool frame is securely supported and cannot be tipped over during this installation procedure. An additional person should support and stabilize the frame at all times during the installation.

1. Position the stop bar in the bottom left side of the frame as shown in Figure 8, resting against the bottom horizontal arm and the vertical back supports.

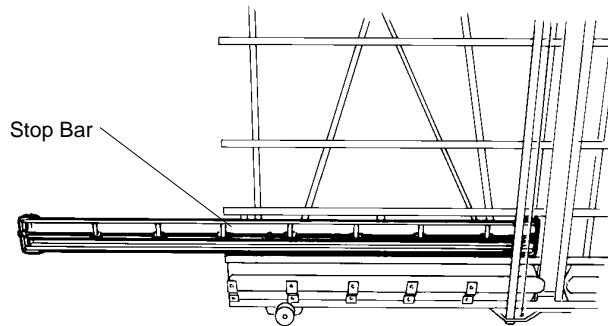


Figure 8: Installing the Stop Bar

2. Working from the front of the tool, attach the three angle supports (Figure 9) to the back of the Stop Bar, using six 5/16 x 3/4" (7.9mm x 19.05mm) hex-head cap screws and nuts. Tighten the nuts securely.

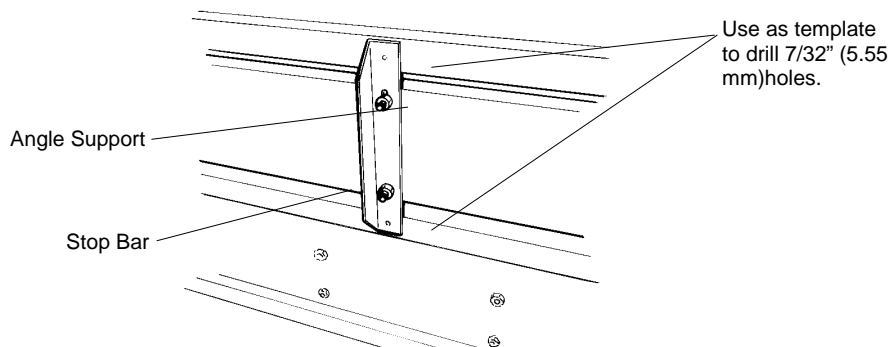


Figure 9: Installing the Stop Bar
(viewed from the rear)

3. Push the stop bar housing as far toward the center of the tool as possible.
4. Working from the back of the machine, use the angle supports as templates to drill six 7/32" (5.55mm) holes (two per bracket) in the horizontal tubes of the frame.
5. Insert and tighten six self-tapping 1/4(6.35mm)-20 hex-head screws to secure the angle support brackets to the frame tubes.

6. Measure out from the blade or bit, and adjust the stop bar ruler by sliding it left or right inside its aluminum extension.

Operation

Set the individual flip stops to the positions desired for repetitive cuts: loosen the collars with the provided Allen wrench, slide the collars to the desired position, and retighten them.

Multiple cuts can be made by flipping the stops up or down to position the work piece at the proper distance from the blade or bit. When setting multiple stops, remember to account for the material lost to the blade kerf.

Quick Stop

The Quick Stop Accessory provides an easy method of setting an exact repeatable cut length for crosscuts and vertical routing cuts. It consists of an aluminum angle extrusion with movable tape measure, a large aluminum stop block with threaded lock knob, and mounting brackets and screws. The Quick Stop can be attached to any horizontal frame member, on any model saw.

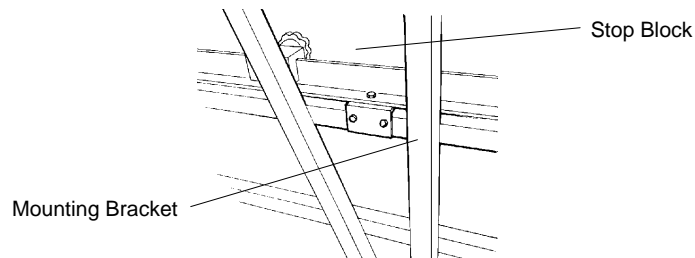
A Left 8' Quick Stop and a Right 5' Quick Stop gauge are standard on the 7000 and 7400 series machines.

Installation

CAUTION: Before beginning installation, disconnect the power supply to the motor, raise the carriage to the top of the guides, and lock the carriage in place with the lock knob.

CAUTION: Be sure the tool frame is securely supported and cannot be tipped over during this installation procedure. An additional person should support and stabilize the frame at all times during the installation.

1. Attach the two mounting brackets to the long aluminum angle bar of the Quick Stop as shown in Figure 10, using the screws provided.



**Figure 10: Installing the Quick Stop
(viewed from rear of frame)**

2. Set the assembled angle bar on the next-to-lowest horizontal bar on the left side (as you are looking at the frame in Figure 11).

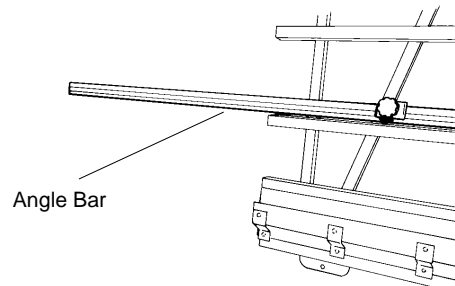


Figure 11: Installing the Quick Stop

3. Push the Quick Stop as far toward the center of the tool as possible.
4. Using the mounting bracket holes as a template, drill four 7/32" (5.55mm) holes in the tool frame.
5. Attach the brackets to the frame, using four 1/4(6.35mm)-20 self-tapping hex-head screws.
6. Measure from the blade or bit, and adjust the Quick Stop measuring tape by sliding it in the angle extrusion.

Operation

1. Position the stop block at the desired cut length, as shown by the Quick Stop measuring tape, and secure the block with the lock knob.
2. Raise the carriage to the top of the guides.
3. Slide the work piece behind the carriage, and hold it firmly against the stop block. **Never reach behind the carriage!**
4. Cut the work piece with a smooth, continuous down stroke of the carriage.

Mid-way Fence

The Mid-way Fence Accessory is a removable horizontal work piece support that mounts halfway up the tool frame. It allows narrow work pieces to be worked at waist height. The fence consists of left and right fixed brackets that mount to the frame, and removable supports for each side. The accessory contains the components shown in Figure 44.

The Mid-way Fence is standard on the 7400 series machines and an available option on the 7000 series machines.

Installation

NOTE: All hex nuts furnished with this accessory are **lock** nuts. During pre-assembly, **do not** completely tighten these nuts.

1. Lay out the parts shown in Figure 12 on a horizontal surface (table or bench) for pre-assembly. Note that one end of each fence extrusion is cut at a 45° angle. The units should be pre-assembled so that these beveled ends will fit against the center of the tool frame at final assembly.

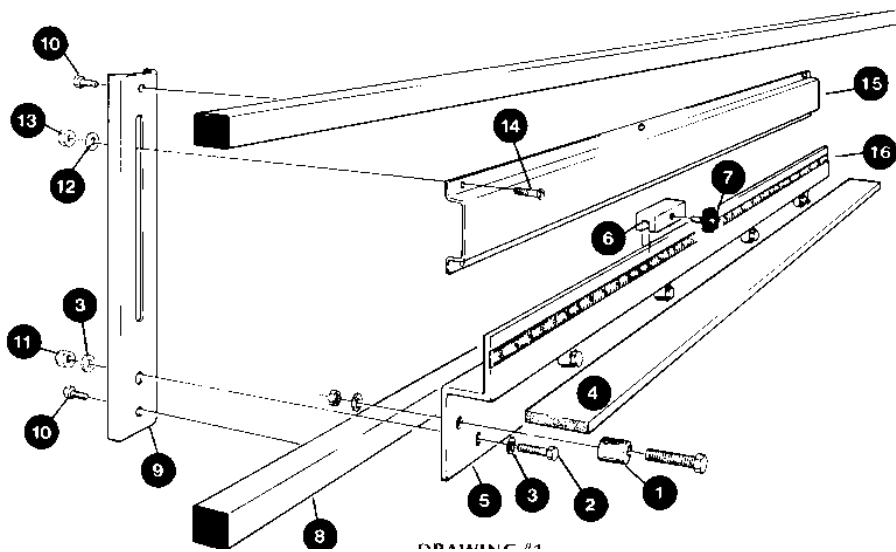


Figure 12: Pre-assembly of Midway Fence

2. Set the complete right-hand fence assembly onto the tool frame as shown in Figure 13.

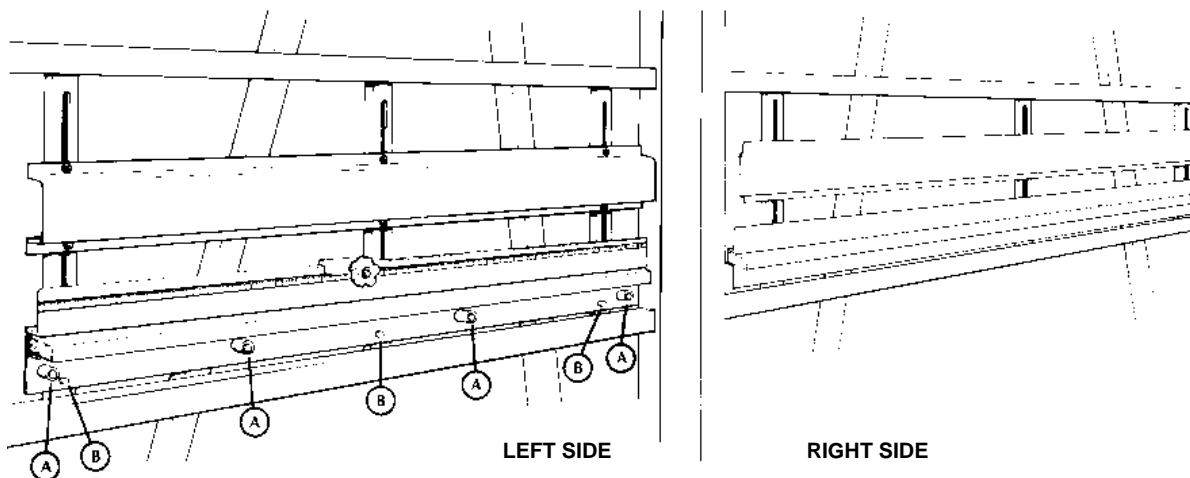


Figure 13: Mounting the Midway Fence

3. Tip the top of the rear support brackets (#9 in Figure 12) under the **upper** horizontal frame member (#8), raise the fence, and push the lower ends of the rear support brackets down behind the **lower** horizontal frame member. The nuts may have to be loosened slightly to perform this step.
4. Tap the entire fence system toward the center of the tool frame, and align (as closely as possible) the 45° angle of the aluminum extrusion (#5) with the 45° angle of the vertical tube at the center of the frame. To assure a neat appearance, be sure the rear support brackets (#9) are flush top and bottom with the machine frame tubes, and that they are at a 90° angle to the horizontal machine frame tubes.
5. Double-check the position of the complete fence assembly. Using the holes in the rear support brackets as a template, drill six 7/32" (11.11mm) mounting holes in the machine horizontal frame tubes, and secure with six self-tapping screws.
6. Repeat Steps 2 through 5 on the left-hand side of the frame.
7. Mount the wooden fence sections (#4), with the 45° angle ends toward the center of the machine, between the aluminum extrusion sections and the cam-type spacers (#1). When not in use, the two

wooden fence sections can be stored in the material support channels (#15) on each side.

8. The friction fit of the wooden fence sections between the aluminum support bracket and the cam-type spacers can be adjusted by turning the bolt heads with a wrench. This fit can be readjusted at any time without realigning the fence system.
9. Align the fence system (see below).

Fence Alignment

1. Disconnect the power supply to the tool.
2. Remove the blade guard.
3. Slightly loosen the bolts that secure the aluminum extrusion (#5, Fig. 12) to the rear support brackets (#9), to allow the extrusion to be moved up or down by tapping it with a mallet.
4. Tap the extrusion to align it evenly, 1/4" (6.35mm) above the **lower** horizontal frame member (#8).
5. Place a carpenter's square on the wood fence, with the longer side on the fence and the shorter side against the saw blade. Raise and lower the carriage to check if the saw blade maintains alignment with the edge of the square. Gently tap the **outside** edge of the fence system to bring the wooden fence and the carpenter's square into alignment with the saw blade travel.
6. Reinstall the blade guard and reconnect the power supply.
7. Using a sample panel approximately 18" (458mm) wide and 40" (1,016mm) long, and a freshly sharpened saw blade, trim 1" (25.4mm) off the end of the panel.
8. Remove the panel from the fence. Turn it around, **keeping the same edge down**. Trim 1" (25.4mm) off the other end.
9. Measure the top and bottom of the piece. When the measurements are the same, or within the tolerance of the machine, tighten all securing bolts.
10. To align the left half of the fence, place a 6-ft (1.8m) or 8-ft (2.4m) straightedge on the right-hand fence. Move it to the left until it extends the full length of the left wooden fence (48" or 1,219mm). Clamp the straightedge to the frame of the machine. Carefully adjust the left aluminum extrusion until the top of the wooden fence gently touches the bottom of the straightedge along its entire surface. Retighten all securing bolts.
11. To adjust the rulers, measure out from the saw blade and place a vertical pencil mark at 24" (610mm). Place both thumbs on the face of the ruler, and slide the ruler to the right or left to the proper location. Test-cut a piece of scrap material to check the ruler position.

Hold Down Bar

A Hold Down Bar, or space reducer, is located on the right side of the saw carriage. By loosening the locking knob, located at the bottom, the bar can be turned in the direction of the frame of the saw and thus reducing the distance, or space, between the bar and the saw frame. This is very important when working with thin, flexible material (ex: plastic sheets or plastic laminate). The Hold Down Bar, in effect, flattens and supports the material making it easier for one person to handle. When the proper distance between the bar and the frame have been determined, the bar is locked in place with the locking knob.

A Hold Down Bar is standard on the 7000 and 7400 series machines.



Carbide Knife Scoring System

The Carbide Knife Scoring System provides two score marks on the surface of a coated particleboard panel, directly in line with the kerf width of the main saw blade. The knives can be adjusted for width of score and depth of cut. The accessory is only available on 7400 series saws.

Installation and Operation

Refer to the instructions packed with the accessory.

Digital Quick Stop Gauge

For a digital display and precision a Digital Quick Stop Gauge accessory is available for the machine. It is available in both the 5' and 8' lengths and can measure in Fractions, Millimeters, and Decimal Inches.

Installation and Operation

Refer to the instructions packed with the accessory.

Sawgear® Measuring System

For improved measuring accuracy a Sawgear® Measuring System is available for 7400 series machines. It uses a proprietary key pad that controls an automated stop for quickly making repeatable measurements.

Installation and Operation

Refer to the instructions packed with the accessory.

Tigerstop® Measuring System

For the most robust and powerful measuring system Tigerstop™ is available for 7400 series machines. This keypad driven system allows for the highest level of accuracy and automation in measuring.

Installation and Operation

Refer to the instructions packed with the accessory.

